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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/685,307	10/10/2000	Mark J. Kittock	2028-174	4343

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PATENT LEGAL DEPARTMENT/A-42-C
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EXAMINER

PICKARD, ALISON K

ART UNIT	PAPER NUMBER
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3676

DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/685,307 Examiner Alison K. Pickard	KITTOCK ET AL. Art Unit 3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-11 is/are pending in the application.
 - 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-11 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-5, and 7 are rejected under 35 U.S.C. 102(b) as anticipated by Olsen (4,392,655) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sakata (6,206,378).

Olsen discloses a pump having clearance seal assembly comprising a stationary member 3 with an opening, a moving member 4, and a sealing member 9 (or 19). The sealing member and moving member (piston) define an initial continuous and uniform gap 26 that remains continuous and uniform under operating pressures (see col. 4, lines 41-43). The sealing member is considered integrally formed with the stationary member in that it is secured within the stationary member. A static seal 17 (or 27) is formed between the stationary and sealing member. Olsen discloses that the gap 26 is configured to allow fluid to fill it and while maintaining

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acceptable leakage. For a system where leakage is not tolerable, it is inherent that the gap would be configured to prevent leakage since leakage would not be “acceptable.”

In the alternative, Sakata teaches that forming a clearance seal gap as small as possible prevents leakage (see col. 3, lines 38-44). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the gap of Olsen as small as possible to prevent leakage as taught by Sakata.

4. Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen (in view of Sakata) as applied to claims 1 and 7 above, and further in view of Holland ‘120.

Olsen does not disclose that the sealing member and moving member are made of ceramic materials. Holland teaches making a clearance seal and piston of ceramic material. Holland teaches that ceramic is not temperature dependent and provides a “virtually dragless sealing action and long wear” (col. 4, line s33-37). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the pump of Olsen by making the seal and piston of ceramic material as taught by Holland to provide an improved assembly that is not affected by temperature and provides a dragless sealing action and long wear.

5. Claims 1, 3-7, and 9-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Kostohris in view of Olsen in view of Sakata.

Kostohris discloses a pump comprising a housing defining a chamber, a piston 14, and a sealing member 34. The sealing member has a fluid tight relationship with the housing. A removable static seal 26 is disposed between the sealing member and housing to maintain a fluid tight relationship. A bearing (either 38 or element between spring and seal in Fig. 2) is disposed

between the piston and casing. Kostohris does not disclose a uniform and continuous gap between the sealing member and piston. Olsen teaches a pump comprising a housing, piston, and sealing member. Olsen teaches forming the sealing member such that it forms a continuous and uniform gap with the piston and maintains a continuous and uniform gap during operating pressures. Olsen teaches that this gap allows fluid in to prevent wear and scoring between the sealing element and piston. While it is considered inherent that the gap could be formed to allow no leakage as an “acceptable leakage rate,” Olsen does not specifically state this. Sakata teaches a clearance seal. Sakata teaches making the gap between the seal and shaft as small as possible to prevent leakage. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the seal 34 of Kostohris with the teachings of Olsen and Sakata to provide a sealing assembly that prevents leakage and reduces wear and scoring.

Response to Arguments

6. Applicant's arguments filed 9-22-03 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., that the seal of Olsen does not prevent seeping between an outer surface of the sealing member and an inner surface of the stationary member) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). And, Olsen does teach a sealing member having a fluid-tight relationship with the stationary member (see

col. 4, lines 23-25), which meets the limitations as claimed. Further, the examiner notes that Applicant's seal 27, is not in contact with the outer surface of the sealing member either.

The examiner maintains that Olsen's disclosure inherently encompasses a gap that prevents leakage. Olsen only states that it is "desirable" (col. 4, line 36) to maintain the gap as large as possible. Olsen does not state that the gap *must* be as large as possible. Further, if no leakage is the "acceptable" leakage, manufacturing tolerances would be critical and achievable, despite how "difficult" it may be. Regardless, Sakata has also been provided for its teaching of a gap that prevents leakage.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). And, In response to applicant's argument that Sakata is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the

claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Sakata teaches a clearance made to prevent leakage. It is this teaching that is being applied to Olsen. Both relate to a clearance seal. Further, a gap made as large as possible could still be the smallest gap possible.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 703-305-0882. The examiner can normally be reached on M-F (9-6:30), with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9326.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1113.



Alison K. Pickard
Examiner
Art Unit 3676

AP